

Application No. 10/650,483
Amendment dated December 20, 2004
Reply to Office Action dated September 20, 2004

REMARKS

Claims 1-10 are pending.

Claims 1-10 stand rejected.

Claims 1 and 6 have been amended.

Claims 11 and 12 has been added.

No new matter has been added.

Claims 1-4 and 6-11 are hereby submitted for reconsideration.

In the Office Action, the Examiner has rejected claims 1-4 and 6-10 under 35 U.S.C. § 112, second paragraph, because the term “integrally formed” is indefinite. Applicants have amended claim 1 to remove the limitation of “integrally formed” and replace it with the clear term “unitarily constructed.” This amendment makes it clear that the extension means is unitarily constructed with the connector. In view of this, Applicants request that this rejection be withdrawn.

Turning to the substantive rejections, the Examiner has indicated that claims 1-4 and 6-10 are rejected under 35 U.S.C. § 103(a) as being obvious over De Buyst (EP 1,206,024 A1). Claim 3 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over De Buyst in view of Auclair (U.S. Patent No. 6,325,678). Lastly, independent claim 1 is also rejected under 35 U.S.C. § 103(a) as being unpatentable over Ekert (U.S. Patent No. 5,630,735).

Applicants respectfully disagree with the Examiner’s contention and submit the following remarks in response.

Application No. 10/650,483
Amendment dated December 20, 2004
Reply to Office Action dated September 20, 2004

The present invention as claimed in independent claim 1 is directed to a connector for connecting two medium-voltage electrical power cables, each including at least one conductor surrounded by an insulative jacket. The connector has tubular contacts adapted to connect together stripped ends of the conductors inserted into said tubular contacts and retained in the tubular contacts by means of screws. The screws directly contact the stripped ends of the connectors.

At one end at least, extension means are unitarily constructed with the connector and adapted to cover a portion of the insulative jacket of the cable over a length greater than 10mm.

In this arrangement, the screws directly contact the stripped ends of the two power cables to ensure a tight connection with the connector and to maintain its connectivity throughout mechanical stresses encountered in power transformers where such medium voltage cables are typically employed.

Furthermore, by unitarily constructing the extension means (elements 6 and 7 in the specification) with the connector, the extensions means is more stable against mechanical stresses and also do not require any additional manipulation after the conductors have been placed within the contacts.

The cited prior art, EP 1,206,024 (herein after the '024 reference) discloses a connector that makes use of separate rubber caps 30a and 30b which need to be fitted onto the connector and over the conductor *after* the conductor has been fitted within the contacts. For example, in the '024 reference in column 6, lines 1-5, state:

"Once conductors 12 and 23 are fixed in their respective parts 41 and 42 of the connector 40, the later parts are interconnected and the bolts are sheared, the two molded caps 30, say 30a and 30b, are slid back over

Application No. 10/650,483
Amendment dated December 20, 2004
Reply to Office Action dated September 20, 2004

the connector 40 until the cover it completely.”

Such an arrangement is in sharp contrast to the present invention where the extension means is unitarily constructed with the connector. For example, there is no teaching or suggestion in the DeBuyst reference for an extension means unitarily constructed with the connector and adapted to cover a portion of the insulative jacket.

As stated above, the present invention does not require any additional manipulation after the conductors have been placed in the contacts. It is specifically for this reason that the present invention is distinguished from the DeBuyst reference in the background section of the specification of the present invention on page 3, line 31 to page 4 line 2 which states:

“This kind of arrangement (referring to the ‘024 reference) provides a result that is satisfactorily from the electrical point of view but is difficult to fit. Two separate caps separate from the connector must be threaded over the ends of the cable before connecting the cables by means of the connector and then pushed over the connector before fitting the insulative sheath.”

In a second rejection, the Examiner has rejected independent claim 1 in view of Ekert. The Ekert reference teaches an electrical connector desired to overcome the drawbacks associated with wire nut and crimp connectors. In Ekert a central crimping area 6 has two openings 14a and 14b for the two conductors to be connected. It is clear from Fig. 2 that the screws 16 hold the two wires/cables 20 in the connector 2 at a portion of the wire/cable 20 that is covered by insulation.

Column 3, lines 32-37 of Ekert states:

“To secure the electrical wires within the connector, insulated screws 16 are inserted into transverse bores 18, the transverse bores 18

Application No. 10/650,483
Amendment dated December 20, 2004
Reply to Office Action dated September 20, 2004

being positioned so that the screws 16 abut the insulated (unstripped) portions 20 of the electrical wires to hold the wires in place."

In sharp contrast, the present invention secures the *stripped ends* of the cables with the screws in order to provide a more secure conducting connection and to prevent the connection from degrading under severe mechanical stresses. Thus, the Ekert reference does not teach or render obvious all of the elements of independent claim 1. For example, there is no teaching or suggestion in Ekert for the stripped ends retained in the tubular contacts by means of screws where the screws directly contact the stripped end of the conductor.

In view of the forgoing, Applicants respectfully request that the rejections of independent claim 1 be withdrawn. Also, as claims 2-4 and 7-10 depend from independent claim 1, they should be allowed for the same reason.

Applicants note that new independent claim 11 and new dependent claim 12 have been added and the dependency of dependent claim 6 has been changed to depend from claim 11. New dependent claim 12 depends from amended claim 6.

New independent claim 11 contains the limitation that the stripped ends of the conductor are retained in the tubular contacts by means of screws, where the screws directly contact the conductor. Thus for the same reason outlined above, the Ekert reference does not teach the elements of new independent claim 11.

Additionally, new independent claim 11, contains the limitation of the connector having a recessed notch such that when the extension means is attached to the connector at the recessed notch, the connector and the extension means form a continuous smooth intersection between one another and that is continuous with the outer diameter of the

Application No. 10/650,483
Amendment dated December 20, 2004
Reply to Office Action dated September 20, 2004

connector.

This limitation and the subject matter of new claim 12 are clearly supported by Figs. 3 and 4 of the present invention as well as the accompanying description in the specification and thus they do not constitute new matter. Furthermore, neither of the two references cited by the Examiner, DeBuyst or Ekert, teach the elements of independent claim 11. The ends of the connectors in both Ekert and DeBuyst do not have such a notch, nor do they have extension means that fit into this notch so as to be flush with the outside diameter of the connector.

In view of the forgoing, Applicants respectfully request that the rejections from claim 1, not be carried over to new independent claim 11 or new dependent claim 12. Also, as claim 6 depends from independent claim 11, it should be allowed for the same reason.

Applicants respectfully submit that the present invention as claimed in claims 1-4, 6-12 is now in condition for allowance, the earliest possible notice of which is earnestly solicited. If the Examiner feels that a telephone interview would advance the prosecution of this application he is invited to contact the undersigned at the number listed below.

Respectfully submitted

SOFER & HAROUN, LLP

Dated: 12/20/04

By:


Joseph Sofer
Reg. No. 34, 438
317 Madison Avenue
Suite 910
New York, New York 10017
(212)697-2800